CONDITIONAL PETITION FOR EXTENSION OF TIME

If any extension of time for this response is required, Applicants request that this be considered a petition therefore. Please charge the required fee to Deposit Account No. 14-1263.

ADDITIONAL FEES

Please charge any further insufficiency of fees, or credit any excess to Deposit Account No. 14-1263.

REMARKS

Claims 1-24 are pending in the application. Claim 1 has been amended to overcome the rejection for alleged indefiniteness. The amendment does not introduce new matter.

The undersigned gratefully acknowledges Examiner's time and attention in participating in a telephone interview. Although it appeared that some progress was made with respect to the inherency of paper liners, some disagreement still persists about the liners made of polymer films. As will be seen below, the objective evidence indicates that polymer films, like release papers, are not inherently UV-opaque. It is respectfully requested that Examiner review these test results.

In addition to the amendment and remarks submitted herewith, Applicants provide an Exhibit describing Luhmann's invention in great detail. Applicants believe in good faith that the Exhibit should clarify the structure of Luhmann's invention, and therefore help illustrate the how distinct it is from the claimed subject matter.

Claims 1-24 were rejected for allegedly being indefinite.

Claims 1-2, 5-7 and 9-24 are held rejected for allegedly being anticipated under § 102(b) by Luhmann.

Claims 1-24 are rejected as allegedly being unpatentable over Luhmann in view of Riley.

The rejections will be addressed in the sequence in which presented in the Office Action.

Indefiniteness

Examiner believes that the term "sheet-like" renders claim 1 indefinite. Although Applicants believe in good faith that persons of ordinary skill would clearly understand the meaning of the term "sheet-like," in the context of liner materials, claim 1 has been amended to delete the offending term.

The amended claim now specifies that the adhesive sheet has UV-impermeable material applied to all adhesive areas of at least the top and bottom faces or is enclosed by UV-impermeable materials, and proceeds to describe three distinct configurations of the materials encompassed by the claims. Please note that each configuration of UV-impermeant materials may be used in combination with one or more of the other configurations. Thus, the claim describes protecting one or more adhesive sheets, as follows:

- an individual adhesive sheet with at least the top and bottom adhesive faces covered by UV-opaque liners; and/or
- an individual adhesive sheet enclosed in a UV-opaque sheath or envelope-like structure; and/or
- at least one adhesive sheet placed in an outer packaging, having at least one transparent packing element.

It is respectfully pointed out that this amendment is not a concession of the propriety of the indefiniteness rejection. Neither is it intended to narrow the scope of the subject matter in any way. The amendment is offered solely for the purpose of expediting the prosecution of this application.

Anticipation by Luhmann

Examiner's Inherency Theory

In support of the rejection under § 102(b), Examiner cites text from Luhmann. However, Applicants respectfully suggest that Examiner has not properly interpreted Luhmann's invention as cited at col. 6, lines 6+.

This text discloses one or more adhesive sheets with a readily detachable laminate. See e.g., col. 6 lines 11-12. There is no express or implied disclosure of any UV paque liners,

enclosures, or packing, etc. that was disclosed as protecting all adhesive surfaces. Neither is there any suggestion of the need or desirability of such extensive protection.

Applicants respectfully direct Examiner's attention to the Exhibit submitted herewith. The Exhibit describes in detail Luhmann's contribution to the art, as well as delineating the limits of this contribution. In brief, UV-opaque grip tabs are located only at one end of an adhesive strip, not over the at least entire top or bottom adhesive faces, nor completely enclosing the adhesive strip as instantly claimed.

The Examiner's reliance on inherency was discussed with the Examiner in a telephone interview. The undersigned and the Applicants gratefully acknowledge Examiner's time and attention in granting the interview. In large part, the interview was predicated on the objective test results disclosed in the specification showing that release papers are not inherently UV-impermeant.

During this interview Examiner apparently became convinced that UV-impermeance or UV-opaqueness was not an inherent property of release liner papers. Accordingly, Examiner urged that the claims be limited to such release papers.

However, Applicants submit that the Examiner should allow release films as well. The test results in the specification indicate that these films, like the release papers, are not inherently UV impermeable. To illustrate this, an additional section of results from the specification is provided below in the section entitled, *Polymer Films are not Inherently UV-Impermeant.* It is respectfully suggested that these results demonstrate that the claims' scope should encompass both paper and polymer film release liners.

<u>Release Papers are not Inherently UV-Opaque</u>

In an apparent attempt to fill the gap left by Luhmann's lack of disclosure of the desirability or need to provide full protection for the adhesive strip, Examiner concludes that "[r]elease paper is inherently UV-impermeable...with electromagnetic radiation being below 2%." See Office Action, page 2, numbered paragraph 3.

"In relying upon the th ory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inher nt characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original). Applicants point out that Examiner provides no objective evidence or line of reasoning presented to support his belief that release liners are inherently UV-impermeable. Therefore, such a conclusion cannot support an anticipation rejection. MPEP § 2112.

That release liners are inherently UV-impermeable is shown to be incorrect by revlewing Applicants' test results presented in the specification. For example, Example III, starting on page 23, clearly indicates that different release papers differentially maintain the functional properties of adhesive strips during exposure to UV light. Thus, not all release liners inherently possess the capacity to prevent UV-induced deterioration of adhesive compositions.

For example, the table on page 24 shows the results of testing the UV-impermeance of different liners with the same adhesive strip. This was assessed by correlating UV exposure with the deterioration of the strip's adhesive properties. The combinations are described in the table on page 23 as III-01 to III-05.

As seen in the table on page 24 the combination of adhesive strip and liner denoted III-01(a)-(c) is much more resistant to UV exposure than combinations having the same adhesive but other liners. The evidence demonstrates that release liners are not inherently UV-impermeant, thus, rebutting the basis of Examiner's maintenance of the rejection.

The conclusion that the liners are not inherently UV-impermeant is further supported from direct measurements of UV transmission through the tested release papers/liners. See table on pages 24-25.

Examiner states "Thus, in the absence of any evidence to the contrary, it remains the Examiner's position that the claimed invention is anticipated by the prior art of record discussed above." Office Action, page 2, last paragraph of numbered paragraph 3. Applicants suggest that the test results in general, and Example III specifically, is clearly sufficient to overcome this inherency-based rejection.

In accordance, Applicants request withdrawal of the rejection of all of the claims under § 102(b).

Polymer Films are not Inherently UV-Impermeant

The specification demonstrates that UV-opaqueness is not an inherent feature of polymer films, anymore than it is to release papers. In view of the following objective evidence and the ensuing discussion, Applicants respectfully request withdrawal of Examiner's provisional requirement of limiting the claims to UV-opaque release papers.

Below is reproduced the table describing the nature of the test specimens, and the respective reference numbers.

Table 1 discloses the effect of UV on the above strips' adhesive properties. It Examiner's theory that all release films are UV-impermeable is correct then increasing the length of the exposure to UV-irradiation should not be deleterious to a strip's adhesive properties. Note that in the peel strength assays, a higher number means a lower adhesive force. .

For example, sample V-01 demonstrates favorable peel strength (1 mm/24h) and good tack (++). However, these values decrease upon exposure to UV for lengths of time varying from 1 to 8 hours. In contrast, sample V-05 shows a much less pronounced decrease in peel strength (from, 8 to 11 mm/24h), and no loss in tack.

TABLE 1

Test number	UV exposure (Suntester)	Peel strength (mm/24h)	Tack[1]
V-01 a	0	1	++
b	1	> 50	-
c	4	> 50	-
d	8	> 50	-
V-02a	0	8	0
b	1	> 50	-
c	4	> 50	-
d	8	> 50	-
V-03a	0	8	0
b	1	40	-
c	4	> 50	-
d	8	> 50	-

V-04a	0	8	0
b	1	10	0
c	4	> 50	-
d	8	> 50	-
V-05a	0	8	0
b	1	10	0
c	4	10	0
d	8	11	0
V-06a	0	8	0
b	1	9	0
c	4	13	0
d	8	18	0

The results above indicate that polymer films are not inherently UV-opaque as evidenced by the differential efficacy in protecting adhesive properties. This is further supported by the UV-transmission data in Table 2. It can be seen that the V-01's UV -induced loss of properties is based on the film liner's high level of UV transmission. Consequently, the theory that all release films are UV-impermeable is incorrect.

TABLE 2

Specimen description	% Transmission	% Transmission	% Transmission	% Transmission
	Wavelength range: 240-280 nm	Wavelength range: 280-320 nm	Wavelength range: 320-360 nm	Wavelength range: 360-420 nm
V-01, V-02	72.6	79.4	85.7	89.1
V-03	2.2	8.6	81.3	85.8
V-04	0.8	1.6	13.7	61.0
V-05	0.2	0.2	0.3	0.6
V-06	0.5	0.3	0.3	50.4

Therefore, because polymer films are not inherently UV-opaque, Applicants respectfully request that Examiner withdraw the requirement to limit the UV-opaque materials to release papers, as such limitation is not warranted in view of the data.

Luhmann Does Not Teach Every Claim Limitation

Claim 1 requires that all adhesive area of the top and bottom faces of the adhesive sheet be protected by UV-opaque materials. This arrangement is not taught or suggested by Luhmann, wherein there are several explicit references to the invention being directed to, e.g., "a UV-opaque covering ***on one end of the strip.***" See, e.g., col. 2 line 4.

Respectfully, Examiner's attention is again directed to the reference accompanying this amendment and response.

The specification expressly discloses that Luhmann is directed to an adhesive strip having "***one end*** of the strip being provided on both sides with a UV-impermeable cover which acts as a ***grip tab*** for pulling." Page 3, 3rd paragraph. This tab allows for separating the strip from a liner without tearing.

Implicit in such an arrangement is that UV protection is only required at the ends. This was subsequently shown not to be sufficient, as indicated in the test results discussed herein.

Luhmann's tab only protects a small percentage of the surface area of the adhesive sheet. See Exhibit, page 2. The tabs do **not** cover the sides of the laminate that are still accessible to UV irradiation. Indeed, given that a 3-dimensional strip, laminate, etc., has two faces and 4 sides, means that by Luhmann providing for UV-impermeant tabs on one end of both faces leaves the remainder of these faces and the other 4 sides uncovered and accessible to UV. It is clear that Luhmann's arrangement cannot fulfill the requirements of claim 1, that the materials, if they are not the individual or outer package, cover at least the top and bottom faces over their entire adhesive ar as. Accordingly, Luhmann cannot anticipate the claim.

Applicants respectfully request that the rejection under § 102(b) be withdrawn.

Obviousness Over Luhmann In View of Riley

Luhmann Teaches Away From the Claimed Subject Matter

Luhmann discloses the use of a UV opaque covering on only one end of an adhesive strip. As such, the disclosure omits any teaching or suggestion of the desirability or usefulness of enclosing the entire adhesive areas of at least the top and bottom faces or the entire sheet in UV impermeant packing. This constitutes a teaching away from Applicants' claims. Therefore, Luhmann individually, or in combination with Riley, is insufficient to maintain the rejection under § 103(a).

A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 220 USPQ 303 (Fed. Cir. 1983);MPEP § 2141.02. In addition, "[a] reference will teach away if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the applicant." *In re* Gurley, 31 USPQ2d 1130 (Fed. Cir. 1994).

In the present case, Luhmann's teaching of only partially covering an adhesive strip's end with the UV-impermeant liner would have discouraged persons of skill in the art from covering the entire top and bottom faces or enclosing the entire sheet. Luhmnn teaches there is no need to go to this extreme and that covering one end is sufficient. Unexpectedly, it is now found that covering one end is insufficient. This example of teaching away is strong evidence for the lack of motivation to combine Luhmann with any reference.

Therefore, on these grounds, it is suggested that Luhmann, individually or combined with Riley, does not support the obviousness rejection.

Luhmann/Riley Does not Afford a Reasonable Expectation of Success in Arriving at the Claimed Subject Matter

Nothing in Riley overcomes the prejudice established by Luhmann. Reley relates to different technology altogether, and, therefore, persons skilled in the art would have been most influenced by Luhmann. Further, Luhmann teaches that covering one end is sufficient.

Riley discloses dyes that impart UV-impermeance to materials capable of absorbing the dye. A cursory review of Riley indicates that Riley's invention was the dye *per se*. However, Riley also discloses that his dyes may be used on anything that would absorb/adsorb it. In this context, Riley then discloses almost every material or fabric known to man. See e.g., pages 1, lines 26-51, 62-66, page 2, lines 10-14 and 74-90; generally in pages 3-4).

The prior art can be modified or combined to reject claims as *prima facie* obvious as long as there is a reasonable expectation of success. *In re Merck & Co., Inc.*, 231 USPQ 375 (Fed. Cir. 1986). See MPEP § 2143.02.

The latter point is important because Applicants' test results show that even within the much smaller sub-genera of release papers and films, persons of ordinary skill could not have reasonably predicted which preparations of liner materials would be sufficiently UV-impermeant to maintain adhesive function. If one applies this uncertainty to Riley's extraordinarily broad genus of dye-binding materials, the lack of predictability is so enormous as to render this portion of Riley's disclosure worthless in the context of guiding the skilled artisan to the claimed combination.

In other words, persons of skill in the art could not have used Riley's disclosure with a reasonable expectation of success, in order to develop Applicants' claimed combination.

On this basis alone, the rejection under § 103(a) should be withdrawn.

Further, Riley provides no evidence that his dye actually functions as predicted – i.e., prevents spoilage of foodstuffs. This substantially adds to the lack of a reasonable expectation of success of using Riley's disclosure to reach the instant claims.

In brief, there could not be a reasonable expectation of success from combining Riley's marginally relevant disclosure with Luhmann to reach the instant claims.

For these reasons, the rejection under § 103(a) may be withdrawn.

CONCLUSIONS

Applicants respectfully solicit withdrawal of all rejections in view of the foregoing amendments and remarks.

Applicants have amended the claims to overcome the alleged indefiniteness alluded to by Examiner.

The remarks, including an analysis of Applicants' test results, are believed to have successfully overcome the rejections under §§ 102(a) and 103(b). Specifically, both release papers and films are shown not to be inherently UV-opaque and therefore, are allowable over Luhmann.

It is suggested that the claims are in condition for allowance and that allowance be granted.

Respectfully Submitted,

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MARK UP OF AMENDED CLAIM

1. (Amended twice) A combination comprising:

a) at least one adhesive sheet having a top, a bottom, and four sides; and

b) a UV impermeable material ~~a pack~~ enclosing said at least one adhesive sheet;

wherein the top and/or bottom of said at least one adhesive sheet has applied to it, ~~comprises~~ a pressure sensitive adhesive composition based on an elastomer resin ~~on one or both sides~~; and

~~wherein said at least one adhesive sheet can be released from a substrate to which it has been adhered by stretching said at least one adhesive sheet in the direction of the bond formed between said at least one adhesive sheet and said substrate; and~~

wherein said at least one adhesive sheet ~~pack~~ is protected from UV-irradiation by UV-impermeable materials in one or more configurations selected from the group consisting of: ~~and comprises at least one of:~~

i) UV-impermeable ~~sheet-like~~ liner materials covering the top and/or bottom of said at least one adhesive sheet ~~all exposed regions of said pressure sensitive adhesive composition~~;

ii) an individual UV-impermeable package enclosing the top, bottom and all of the four sides of each of said at least one adhesive sheet, ~~said individual package comprising transparent packing elements~~; and

iii) an outer package enclosing a plurality of said adhesive sheets wherein said outer package comprises at least one transparent packing element.

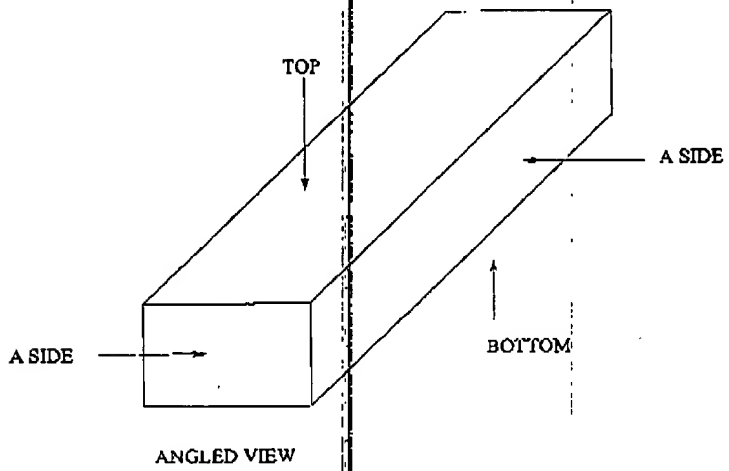
EXHIBIT 1: CONSTRUCTION OF THE ADHESIVE STRIP ACCORDING TO LUHMANN ET AL., U.S. PATENT NO. 5,491,012

The invention in U.S. Patent No. 5,491, 012 ("Luhmann") relates to a conventional strip of stretch-release adhesive tape, which, as set forth in the abstract, at "one end of the strip [is] provided *on both sides* with a UV-opaque covering which at the same time serves as a tab for pulling." Typical dimensions of the adhesive film strip are given in the Table in Luhmann at column 5, lines 33-38. The adhesive film strip has a length of "preferably 25 mm to 80 mm including a grip [tab] with preferably 8 mm to 25 mm length." In other words, the grip tab is approximately 1/3 to 1/4 of the length of the adhesive film strip.

The construction of Luhmann's adhesive film strip begins, for example, with a film strip of solid adhesive. The film strip of solid adhesive has a top, a bottom and four sides.

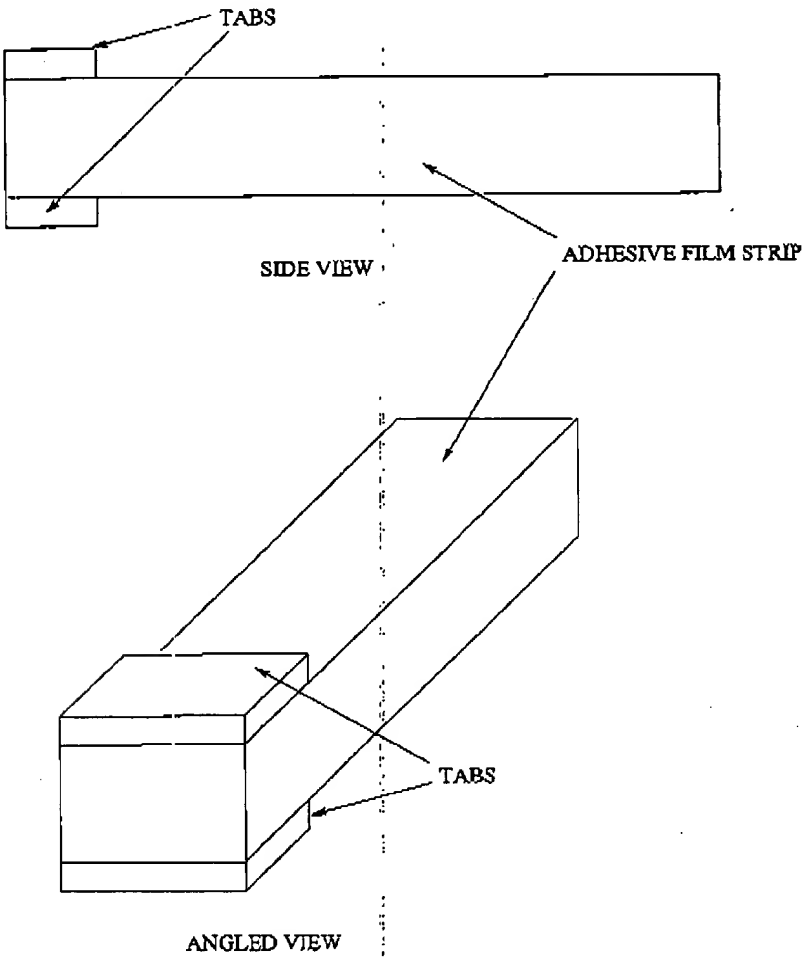
SIDE VIEW

THE STRIP OF SOLID ADHESIVE

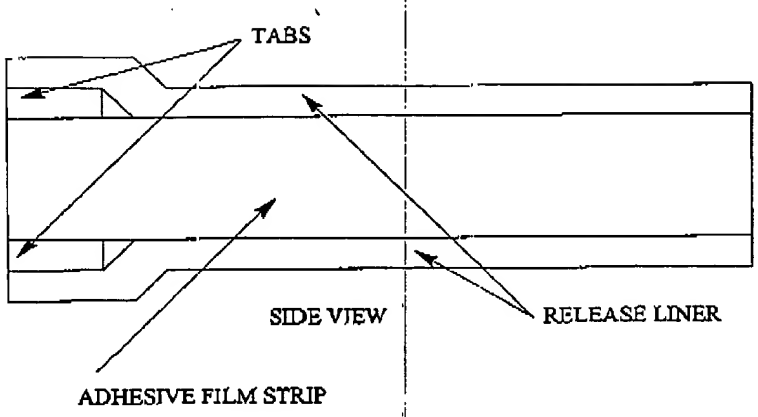


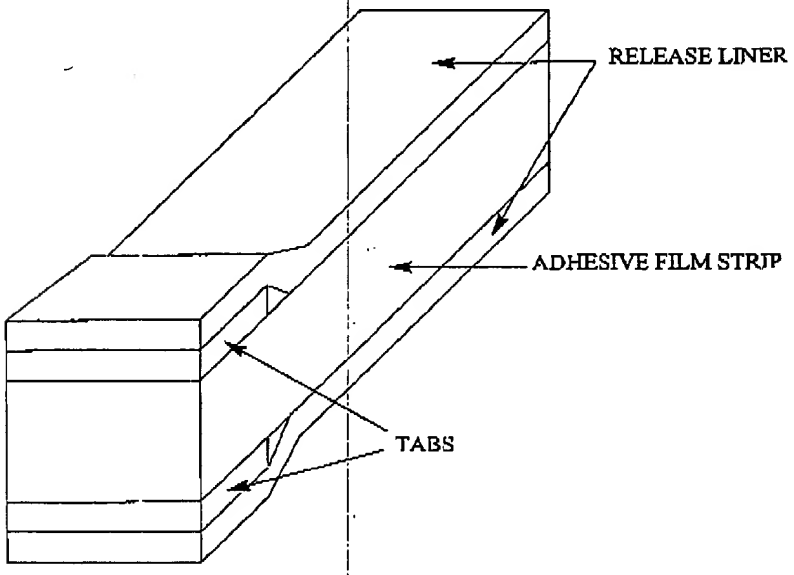
ANGLED VIEW

In the next step, a piece of UV-opaque film is added on one end of the adhesive film strip to the top face and the bottom face ("both sides") to serve as a grip tab.

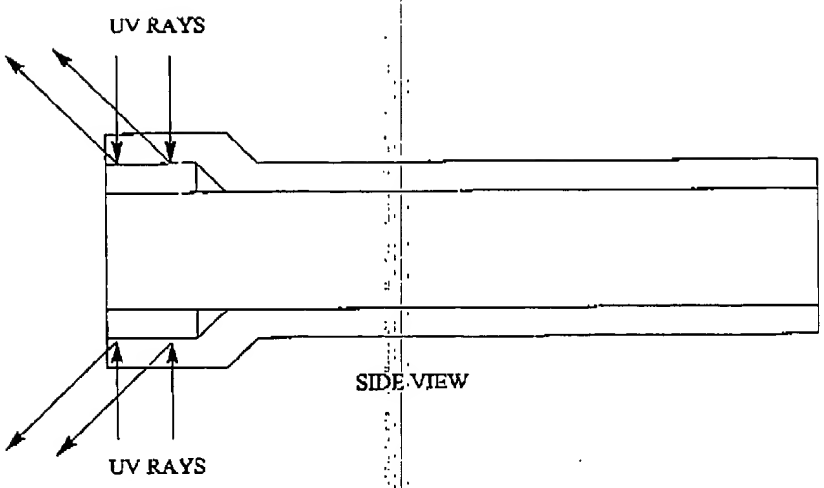


In the final step, a first sheet of release liner is placed over the top face and a second sheet of release liner is placed over the bottom face.

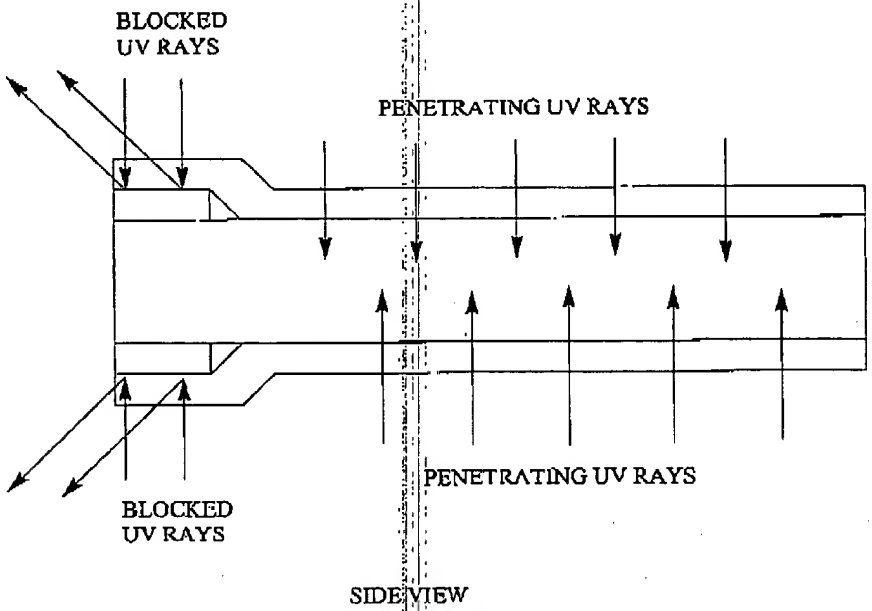




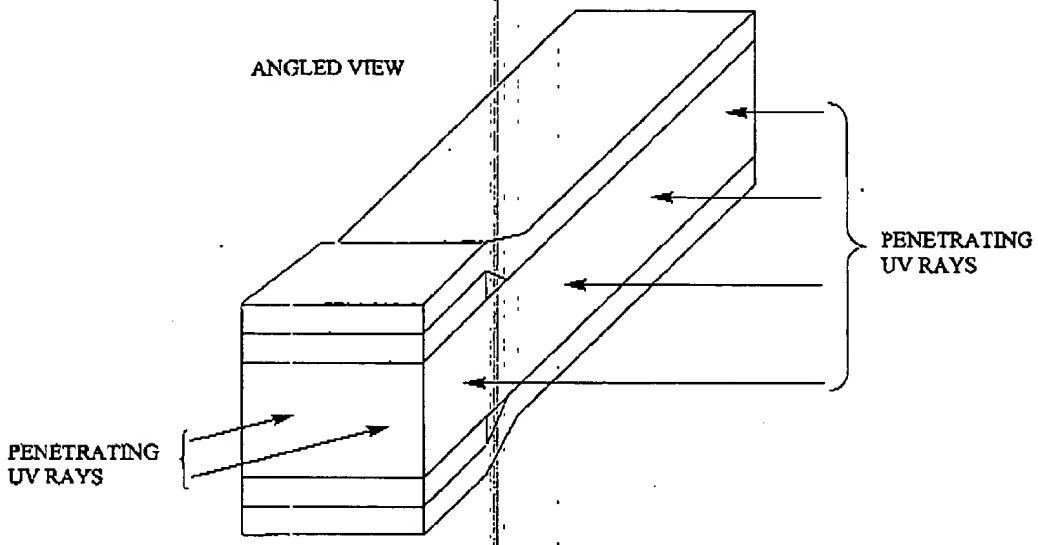
Since Luhmann's grip tab pieces are UV-opaque, UV rays directed from the top and bottom of the adhesive film strip onto the grip tab pieces will be blocked and will not penetrate the adhesive film strip. However, the portions of the adhesive to which the grip tabs have not been applied are still freely accessible to harmful UV rays, and tend to result in a substantial deterioration of adhesive properties. Thus, the entire product is compromised.



The deleterious effects of UV exposure on the adhesive were found to persist because, in part, Luhmann does not teach or suggest that the release liner should be UV-opaque, and as shown in the instant specification, this is not an inherent property. Accordingly, UV rays directed from the top and the bottom at any point of the adhesive film strip *not* covered by the UV-opaque grip tab will penetrate the adhesive film strip.



It should be noted that even if the release liner was made of UV-opaque material, UV rays directed not from the top and/or the bottom of the adhesive film strip, but, instead, *from one of the four sides of the adhesive film strip would still penetrate the adhesive film strip as* ***these four sides of the adhesive film strip*** would remain ***uncovered.***



While Luhmann was obviously concerned with the effect of UV rays on the adhesive film strip, that concern was restricted to the area of the adhesive film strip that is grasped and pulled to release the adhesive film strip from a substrate. Thus, Luhmann clearly directs persons skilled in the art to place UV-opaque material on "both sides" of only "one end" of the adhesive film strip. Luhmann teaches that this arrangement of UV-opaque material is sufficient to solve the problem of tearing. See Luhmann at column 2, lines 4-6, wherein Luhmann teaches, in no uncertain terms, that "[t]he use of a UV-opaque covering *on one end of the strip* successfully avoids the occurrence of tears when the strip is pulled for the purpose of detachment." See, again, the abstract, for the teaching that the "UV-opaque covering" is provided on "one end of the strip * * * *on both sides.*"

Contrary to Luhmann's clear teachings, it has now been discovered that placing UV-opaque material on both sides of only one end of the adhesive film strip does not, in fact, prevent all occurrences of tearing. Specifically, it has been discovered that deleterious

UV-rays can enter the adhesive film strip from any directions not blocked by the UV-opaque grip tabs, and thereby, lead to tearing of the adhesive film strip and a deterioration of the adhesive's properties. Therefore, according to the present invention, for example, ***all exposed surfaces*** of the adhesive film strip may be covered with UV-opaque material.

According to the teachings of the present invention, a significant benefit may be achieved by use of UV-opaque materials that (a) line the top and/or bottom of the strip; or (b) that encase an individual strip of adhesive like a gum wrapper; and/or (c) constitute an outermost package for a plurality of adhesive strips or for at least one adhesive strip and another item, such as an article to be bonded to the adhesive film strip, provided the outermost package contains at least one transparent element.

There is no teaching or suggestion in Luhmann that the entirety of at least the top and bottom faces of the adhesive film strip should be covered with UV-opaque material. In fact, as indicated previously, Luhmann expressly teaches away from such a construction by clearly teaching that UV-opaque material should be placed on "both sides" of only "one end" of the adhesive film strip. Thus, Luhmann clearly provides a UV-opaque material on only a small portion of the top and bottom faces of the adhesive film strip, and does not either teach or suggest the provision of UV-opaque material over the entirety of at least the top and bottom faces, nor does Luhmann suggest completely enclosing at least one adhesive strip in a UV-opaque individual package and/or in a UV-opaque outer package.